

What is claimed is:

1. A method for accessing documents using a graphical user interface, the method comprising the steps of:

5       accessing document properties for a document, the document properties indicating at least one of a size of the document, an age of the document, and a time associated with the document;

          rendering a document selection display that provides a document identifier associated with the document, the document identifier indicating, on the document  
10   selection display, a correlation between at least two of the size of the document, the age of the document, and the time associated with the document;

          receiving a user document selection associated with the document identifier; and  
          retrieving the document associated with the document identifier.

15   2. The method of claim 1 wherein the step of accessing document properties for a document comprises the steps of:

          detecting an update signal indicating that the document properties for the document should be updated;

          in response to the update signal:

20       obtaining a document identity for the document;

          forwarding the document identity in a document property request signal to a document server process in order to obtain the document properties for the document identified by the document identity;

          receiving the document properties for the document in a document  
25   property response signal from the document server process; and  
          storing the document properties in a document properties file.

3. The method of claim 2 wherein the update signal is automatically and periodically generated such that document properties for the document are automatically and  
30   periodically updated.

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4. The method of claim 2 wherein, in response to the update signal, the step of accessing document properties for a document further comprises the steps of:

forwarding a time request signal to a document server computer system operating

5 the document server process;

receiving a time response signal from the document server computer system operating the document server process, the time response signal indicating an available communications bandwidth to the document server computer system; and

10 computing a time document property associated with the document based on the time response signal and a document property corresponding to the size of the document.

5. The method of claim 1 wherein the step of rendering a document selection display comprises the steps of:

15 displaying a correlation framework including indices that provide a visual correlation between at least two of sizes of documents, ages of documents, and times associated with documents; and

20 displaying the document identifier within the correlation framework at a location that indicates at least two of the size of the document, the age of the document, and a time associated with the document in relation to the indices of the correlation framework to provide an indication of document property relationships for the document associated with the document identifier.

25 6. The method of claim 5 wherein the steps of accessing and rendering are performed for a plurality of documents using a single correlation framework, such that document identifiers displayed in the single correlation framework for respective documents in the plurality of documents provide an indication of document property relationships between the plurality of documents.

7. The method of claim 5 wherein the step of displaying a correlation framework displays the correlation framework as a multi-dimensional grid having a respective indicia corresponding to each of size, age, and time of documents.

5 8. The method of claim 5 wherein:

the correlation framework is a first correlation framework that includes a first set of correlations between document properties for a first set of documents, and wherein the step of rendering a document selection display further includes the steps of:

10 displaying selections of multiple correlation frameworks on the graphical user interface, each selection associated with a respective correlation framework that provides a correlation between document properties associated with a respective set of documents;

receiving, from the selections of multiple correlation frameworks, a selection of a second correlation framework which correlates document identifiers for a second set of documents to be displayed on the document selection display; and

15 in response to the step of receiving a selection of a second correlation framework, displaying the second correlation framework including indices that provide a visual correlation between at least two of sizes, ages, and times associated with the second set of documents.

20 9. The method of claim 8 wherein the step of displaying the second correlation framework replaces the first correlation framework with the second correlation framework on the graphical user interface to present a visual correlation of document properties associated with the second set of documents.

25 10. The method of claim 5 wherein the step of rendering a document selection display further comprises the steps of:

displaying a document link display within the document selection display, the document link display including a document link associated with the document for which the document identifier is displayed on the correlation framework;

wherein the step of receiving a user document selection associated with the document identifier comprises a step of receiving a user selection of the document link in the document link display associated with the document for which the document identifier is displayed on the correlation framework; and

5           in response to receiving the user document selection, displaying at least a portion of the document properties associated with the document corresponding to the user document selection.

10           11. The method of claim 5 wherein the step of displaying the document identifier within the correlation framework displays the document identifier according to a first perspective visual correlation and wherein the step of rendering a document selection display further comprises the steps of:

15                 displaying at least one view control within the document selection display, the at least one view control allowing a user to manipulate the correlation framework;  
                  detecting a view change operation on the at least one view control; and  
                  in response to the step of detecting, transforming the first perspective visual correlation to a second perspective visual correlation based on the view change operation.

20           12. The method of claim 5 wherein the document selection display includes a document access mechanism and wherein the step of receiving a user document selection associated with the document identifier includes the step of detecting operation of the document access mechanism; and

25                 wherein the step of retrieving the document associated with the document identifier is performed in response to the step of detecting operation of the document access mechanism and includes the steps of:  
                              displaying a document display area on the graphical user interface;  
                              retrieving contents of the document; and  
                              displaying the contents of the document in a document display area on the graphical user interface.

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accessing document properties for a document, the document properties indicating at least one of a size of the document, an age of the document, and a time associated with the document;

rendering a document selection display on the graphical user interface that provides a document identifier associated with the document, the document identifier indicating, on the document selection display, a correlation between at least two of the size of the document, the age of the document, and the time associated with the document;

receiving a user document selection associated with the document identifier via the input output interface; and

retrieving the document associated with the document identifier via the communications interface.

15. The computer system of claim 14 wherein when the document viewer process causes the computer system to perform the step of accessing document properties for a document, the computer system performs the steps of:

detecting an update signal indicating that the document properties for the document should be updated;

in response to the update signal:

obtaining a document identity for the document;

forwarding the document identity in a document property request signal, via the communications interface, to a document server process in order to obtain the document properties for the document identified by the document identity;

receiving, via the communications interface, the document properties for the document in a document property response signal from the document server process; and

storing the document properties in a document properties file.

16. The computer system of claim 15 wherein the document viewer process automatically and periodically generates the update signal such that document properties for the document are automatically and periodically updated.

17. The computer system of claim 15 wherein in the step of accessing document properties for a document, the computer system further performs the steps of:

forwarding a time request signal to a document server computer system operating the document server process;

receiving a time response signal from the document server computer system operating the document server process, the time response signal indicating an available communications bandwidth to the document server computer system; and

computing a time document property associated with the document based on the time response signal and a document property corresponding to the size of the document.

18. The computer system of claim 14 wherein when the document viewer process causes the computer system to perform the step of rendering a document selection display, the document viewer process causes the computer system to perform the steps of:

displaying, on the graphical user interface on the display, a correlation framework including indices that provide a visual correlation between at least two of sizes of documents, ages of documents, and times associated with documents; and

displaying, on the graphical user interface on the display, the document identifier within the correlation framework at a location that indicates at least two of the size of the document, the age of the document, and a time associated with the document in relation to the indices of the correlation framework to provide an indication of document property relationships for the document associated with the document identifier.

19. The computer system of claim 18 wherein the document viewer process performs the steps of accessing and rendering for a plurality of documents using a single correlation framework displayed on the graphical user interface on the display of the computer system, such that document identifiers displayed in the single correlation framework for respective documents in the plurality of documents provide an indication of document property relationships between the plurality of documents.

20. The computer system of claim 18 wherein when the document viewer process causes the computer system to perform the step of displaying a correlation framework, the document viewer process causes the computer system to display the correlation framework as a multi-dimensional grid having a respective index corresponding to each of size, age, and time of documents.

21. The computer system of claim 18 wherein:

the correlation framework is a first correlation framework that includes a first set of correlations between document properties for a first set of documents; and

wherein when the document viewer process causes the computer system to perform the step of rendering a document selection display, the document viewer process causes the computer system to further perform the steps of:

displaying selections of multiple correlation frameworks on the graphical user interface, each selection associated with a respective correlation framework that provides a correlation between document properties associated with a respective set of documents;

receiving, from the selections of multiple correlation frameworks, a selection of a second correlation framework which correlates document identifiers for a second set of documents to be displayed on the document selection display; and

in response to the step of receiving a selection of a second correlation framework, displaying the second correlation framework including indices that provide a visual correlation between at least two of sizes, ages, and times associated with the second set of documents.

22. The computer system of claim 21 wherein when the document viewer process causes the computer system to perform the step of displaying the second correlation framework, the document viewer process causes the computer system to replace the first correlation framework with the second correlation framework on the graphical user interface on the display.

23. The computer system of claim 18 wherein when the document viewer process causes the computer system to perform the step of rendering a document selection display, the document viewer process causes the computer system to perform the steps of:

displaying a document link display within the document selection display, the document link display including a document link associated with the document for which the document identifier is displayed on the correlation framework; and

wherein the step of receiving a user document selection associated with the document identifier includes the step of receiving a user selection of the document link in the document link display associated with the document for which the document

identifier is displayed on the correlation framework; and



in response to receiving the user document selection, displaying at least a portion of the document properties associated with the document corresponding to the user document selection.

24. The computer system of claim 18 wherein when the document viewer process causes the computer system to perform the step of displaying the document identifier within the correlation framework, the computer system displays the document identifier according to a first perspective visual correlation on the display; and

wherein when the document viewer process causes the computer system to perform the step of rendering a document selection display, the document viewer process causes the computer system to perform the steps of:

displaying at least one view control within the document selection display, the at least one view control allowing a user to manipulate the correlation framework;

detecting a view change operation on the at least one view control; and

in response to the step of detecting, transforming the first perspective visual correlation to a second perspective visual correlation based on the view change operation.

25. The computer system of claim 18:

wherein the document viewer process produces a document selection display on the display that includes a document access mechanism;

wherein the document viewer process causes the computer system to perform the step of receiving a user document selection associated with the document identifier, wherein the document viewer process causes the computer system to perform the step of detecting operation of the document access mechanism; and

wherein the document viewer process causes the computer system to perform the step of retrieving the document associated with the document identifier in response to the step of detecting operation of the document access mechanism, the document viewer process causes the computer system to perform the steps of:

displaying a document display area on the graphical user interface on the display;

retrieving a contents of the document; and

displaying the contents of a document in a document display area on the graphical user interface.

26. The computer system of claim 25 wherein the document access mechanism is operated by a user using the input output interface to select, on the graphical user interface on the display, at least one of:

i) a selection of a document identifier;

ii) a selection of a document link; and

- iii) a selection of a document page selection.

27. A computer system comprising:

an input output interface;

a communications interface;

a display;

a memory;

a processor; and

an interconnection mechanism coupling the input output interface, the communications interface, the display, the memory and the processor;

wherein the memory is encoded with a document viewer application that when performed on the processor, produces a document viewer process that provides a means for the computer system to display a graphical user interface on the display allowing a user to access documents, such means including:

means for accessing document properties for a document, the document properties

indicating at least one a size of the document, an age of the document, and a time associated with the document;

means for rendering a document selection display on the graphical user interface that provides a document identifier associated with the document, the document identifier indicating, on the document selection display, a correlation between at least two of the

size of the document, the age of the document, and the time associated with the document;

means for receiving a user document selection associated with the document identifier via the input output interface; and

5 means for retrieving the document associated with the document identifier via the communications interface.

28. The computer system of claim 27 wherein the means for rendering a document selection display further comprises:

10 means for displaying a correlation framework including indices that provide a correlation between at least two of sizes of documents, ages of documents, and times associated with documents; and

means for displaying the document identifier within the correlation framework at a location that indicates at least two of the size of the document, the age of the document,  
15 and a time associated with the document in relation to the indices of the correlation framework to provide an indication of document property relationships for the document associated with the document identifier.

29. A computer program product having a computer-readable medium including  
20 computer program logic encoded thereon that, when performed on a computer system having a coupling of a memory, a processor, and a display provides a method for accessing document content using a graphical user interface on the display of the computer system by performing the operations of:

accessing document properties for a document, the document properties indicating  
25 at least one of a size of the document, an age of the document, and a time associated with the document;

rendering a document selection display that provides a document identifier associated with the document, the document identifier indicating, on the document selection display, a correlation between at least two of the size of the document, the age  
30 of the document, and the time associated with the document;

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receiving a user document selection associated with the document identifier; and  
retrieving the document associated with the document identifier.

30. The computer program product of claim 29 wherein the computer program logic that,  
when performed on the computer system, causes the computer system to perform the  
operation of rendering a document selection display further causes the computer system  
to perform the operations of:

displaying a correlation framework including indices that provide a correlation  
between at least two of sizes of documents, ages of documents, and times associated with  
documents; and

displaying the document identifier within the correlation framework at a location  
that indicates at least two of the size of the document, the age of the document, and a time  
associated with the document in relation to the indices of the correlation framework to  
provide an indication of document property relationships for the document associated  
with the document identifier.

31. A method for correlating document information using a graphical user interface, the  
method comprising the steps of:

displaying a correlation framework on the graphical user interface, the correlation  
framework including indices that provide a correlation between document properties; and

displaying a document identifier within the correlation framework at a location on  
the correlation framework that provides an indication of values associated with document  
properties of the document associated with the document identifier, thus providing an  
indication of document property values for document properties of the document  
associated with the document identifier.

32. The method of claim 31, further comprising the steps of:

receiving a selection of the document identifier from within the correlation  
framework; and

accessing the document associated with the document identifier in response to receiving the selection of the document identifier associated with the document.

33. The method of claim 31 wherein the document properties include at least two of  
5 sizes of documents, ages of documents, and times associated with documents.

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